

REMARKS

Claim 16 has been amended based on the recitations of claim 28 and the disclosure at page 28, lines 19-21 in the specification. Claims 19, 20, and 28 have been canceled. Claim 22 has been amended in view of the cancellation of claim 19. Claim 31 has been added including recitations found in claims 16, 19 and 28. Claim 32 has been added including recitations found in claim 20. Claim 33 has been added including recitations found in claim 13.

Entry of the above amendment is respectfully requested.

Obviousness Rejection over Sung et al.

On page 2 of the Office Action, in paragraph 2, claims 16-22 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sung et al., US 6,335,118.

In response, Applicants note initially that Sung et al. describe a material wherein carbon-carbon double bonds of polyolefin such as 1,2-polybutadiene are sulfurated in the presence of an amine promoter. Sung et al. also disclose in col. 6, lines 17-21 that its material is prepared in such a way that "unsaturated double bond is saturated by sulfuration and provides a stable sulfurated material with carbon-carbon single bond skeleton." Sung et al. also describe in col. 9, lines 30-33 (Example VI) that in an IR spectrum of a sample material, the absence of absorption peaks due to the vibration of C=C-H and C=C of 1,2-polybutadiene indicate the saturation of double bond. It appears from these descriptions that Sung et al. suggest that the best material is one in which no carbon-carbon double bonds exist.

Further, Applicants submit that the difference between the invention described in Sung et al. and the invention of claim 16 as amended should be understood as follows.

In Example XI of Sung et al., it is described that an electrode is prepared with paste containing the sulfurated 1,2-polybutadiene prepared according to Example VII and acetylene black (see column 10, EXAMPLE XI). Example XI describes that the paste is applied onto a copper metal sheet, dried at 60-80 °C, and pressed. It is not described that the paste is **cured**. In this connection, Sung et al. do not teach or suggest a **cured** product as claimed in the present invention.

On the contrary, the invention of claim 16 as amended relates to a hydrothermally resistant electroconductive **cured** product by curing a curable composition using a *curing initiator selected from the group consisting of organic peroxides and azo compounds*. As a result of the curing reaction, carbon-carbon double bonds in the side chain of 1,2-polybutadiene are crosslinked and the composition results in the cured product having a Tg of 160°C or more, as defined in claim 16 as amended.

Thus, Applicants submit that the present invention is not obvious over Sung et al., and withdrawal of this rejection is respectfully requested.

Obviousness Rejection over Landi et al.

On page 2 of the Office Action, in paragraph 3, claims 16-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Landi et al., US 6,586,533.

In response, Applicants submit initially that Landi et al. disclose a thermosetting composition based on polybutadiene or polyisoprene resins, which is suitable for a material to be laminated on electrical circuit substrates. Landi et al. describe that silicon carbide is contained in the composition as an insulating filler.

It is intended that the electroconductive carbonaceous material in the composition of the present invention is not a carbon element containing compound such as silicon carbide, but rather is essentially a carbon material per se. In this regard, however, it is noted that boron may be contained in order to enhance electroconductivity of the carbonaceous material. Since in Landi et al., silicon carbide is listed in the same manner as insulating fillers, such as glass spheres, Applicants submit that the Examiner's viewpoint is unreasonable. However, in order to expedite the prosecution, Applicants have added the limitation of claim 28 to claim 16 to clearly exclude the silicon carbide described in Landi et al. from the electroconductive carbonaceous material.

Thus, Applicants submit that the present invention is not obvious over Landi et al., and withdrawal of this rejection is respectfully requested.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Bruce E. Kramer
Bruce E. Kramer
Registration No. 33,725

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE
23373
CUSTOMER NUMBER

Date: July 29, 2009